



**Training Proposal for:**  
**California Labor Federation, AFL-CIO**  
**Clean Energy Workforce Training Program (CEWTP)**

**Agreement Number: ET10-0606**

Panel Meeting of: **January 29, 2010**

ETP Regional Office: Sacramento

Analyst: J. Basquez

**PROJECT PROFILE**

Contract

Type:      Retrainee  
              New Hire

Industry

Sector(s):    Construction  
                  Green Technology

Counties

Served:      Statewide

Union(s):    ☒ Yes    ☐ No

International Brotherhood of  
Electrical Workers (IBEW);  
Sheet Metal Workers; United  
Association (UA) – Plumbers;  
Laborers International Union of  
North America (LIUNA)

**FUNDING DETAIL**

All funding will be under the American Recovery and Reinvestment Act (ARRA).

Program Costs	Support Costs	Total ETP Funding	In-Kind Contribution
\$703,382	\$45,821	\$749,203	Inherent

## **TRAINING PLAN TABLE**

Job No.	Job Description (by Contract Type)	Type of Training	Estimated No. of Trainees	Range of Hours		Average Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	Retrainee	Commercial Skills	60	24 - 200	0	\$789	\$24.79
				Weighted Avg: 41			
2	Retrainee SB<100	Commercial Skills	187	24 - 200	0	\$862	\$24.79
				Weighted Avg: 31			
3	New-Hire	Commercial Skills	687	24 - 200	0	\$787	\$24.79
				Weighted Avg: 37			
<b>ETP Minimum Wage by County (Benchmark Wage):</b> \$14.87 for Alameda, Contra Costa, Los Angeles, Marin, Orange, San Francisco, San Mateo, Santa Clara, and Santa Cruz counties; \$14.64 for Sacramento County; \$14.30 for San Diego County; \$13.63 for Ventura County; and \$13.63 for all other counties.							
<b>Health Benefits:</b> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No      This is employer share of cost for healthcare premiums – medical, dental, vision.							
<b>Used to meet the Post-Retention Wage?:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Maybe							
Participating employers will not need to use health benefits to meet the Post-Retention Wage.							

Wage Range by Occupation	
Occupation Title	Wage Range
Electrician Journey-level	
Sheet Metal Journey-level	
Plumber Journey-level	
Laborer Journey-level (General Laborer, Weatherization Tech, Weatherization Auditor)	

## **INTRODUCTION**

The California Labor Federation, AFL-CIO (CalFed) is comprised of more than 1,200 AFL-CIO unions, representing 2.1 million members in manufacturing, retail, construction, hospitality, public sector, health care, entertainment, and other industries. CalFed has been a leader in driving research and initiatives that support the green movement. Last year, CalFed and the State Building & Construction Trades Council of California jointly developed a Building Green Skills ETP Training program to retrain journey-level workers in California's construction trades to transition into the new green economy.

Under this CEWTP-funded project, CalFed seeks funding to retrain 247 incumbent workers (Job Numbers 1 and 2) and 687 unemployed workers (Job Number 3) throughout California. Trainees will be electricians, sheet metal workers, plumbers, and laborers.

All trainees will be at the journey-level and will have obtained any state certifications required for working at that level in the pertinent occupation or field. Under the Panel's guidelines for CEWTP, the 70% Portfolio Model will be made available for new-hire trainees. A Certificate of Completion or Competency will be required as a condition of using the 70% Portfolio Model. The retention period may be 200 hours within 365 days, consistent with the guidelines.

All trainees will be represented by the International Brotherhood of Electrical Workers (IBEW); Sheet Metal Workers; United Association (UA) – Plumbers; or Laborers International Union of North America (LIUNA).

According to CalFed representatives, new green regulations, standards, and job requirements make upgrade training an absolute necessity for workers to stay competitive. This new CEWTP funding will help the JATCs provide well organized and quality green training.

## **PROJECT DETAILS**

This training outlined in this proposal is specifically designed to provide skills training in green technology.

### **Curriculum**

Training in all national electrical and other building codes shall be specific to the installation or maintenance of solar or other green/clean systems. Computer Skills and Business Skills shall not exceed 10% of total training hours. (See Exhibit B: Menu Curriculum)

The California Energy Commission (CEC) has asked ETP to continue to refine the Curriculum so as to ensure it focuses on green/clean job skills. For this reason, the Curriculum will be adjusted, based on further consultation between ETP and the CEC, and CalFed, prior to contract execution.

### **Trainee Recruitment**

Recruitment efforts will primarily consist of traditional outreach methods, such as flyers, newsletters, and press releases. This program will target: (1) JATCs that have shown an ability to conduct successful journey-level training and (2) Employers that have responded to marketing efforts and have submitted a comprehensive application that demonstrates their commitment to conduct green training.

### **Employer Demand for Training**

The participating employers will be members of the following JATCs: Tri County Electrical JATC; Fresno, Madera, Kings, and Tulare Counties for CA Electrical JATC; Santa Clara County Electrical JATC; Kern County Electrical JATC; San Diego Sheet Metal Workers JATC; UA Local 467 JATC; San Mateo Electrical JATC; Sacramento Electrical JATC; Laborers Training, Retraining and Apprenticeship Trust of Southern California; and San Francisco County Electrical JATC.

While some of these JATCs have received and continue to receive “core program” ETP funding for the same trainee population, this proposal will deliver new skills in green/clean technology, which is not available through any JATC. All participating employers, but for members of a JATC, will be screened for compliance with the Panel’s guidelines for eligibility under CEWTP prior to trainee enrollment.

## **RECOMMENDATION**

For the reasons set forth above, staff recommends approval of this proposal.

**DEVELOPMENT SERVICES**

Development services are still being negotiated.

**ADMINISTRATIVE SERVICES**

CalFed will retain Strategy Workplace Communication to perform administrative services in connection with this proposal for a fee to be determined, but not to exceed 13% of payment earned.

**TRAINING VENDORS**

N/A

**Exhibit B: Menu Curriculum**

Computer & Business Training cannot exceed 10% of total training hours

**Class/Lab Hours****24-200**

Trainees will receive any of the following:

**COMMERCIAL SKILLS - Electricians**Codeology - Solar Power

National Electrical Code

Other Recognized Standards (installation changes)

Plan, Build, and Use

Related Standards (mandatory and permissive rules)

Special Occupancies and Equipment

Arc Flash

AC/DC Principles - Solar Power

Math for Electricians

Ohm's Law

Generators

Inductance/Reactance

Series/Parallel Circuits

Grounding - Solar Power

Grounding and Bounding

National Electrical Code Article 100-Definitions and Provisions

National Electrical Code Article 110-Requirements

National Electrical Code Article 90-Introduction

National Electrical Code Article Chapters 1-4

Fire Alarm Systems and Installations - Solar Power

Definitions and Systems

Initiating Devices and Notification Systems

National Electrical Code and Installation Requirements

Start-Up and Check Out Procedures

National Fire Protection Act, 1972 (NFPA 72)

Fire Life Safety - Solar Power

National Electrical Code Chapters 1-3 and 5 (relating to fire alarms)

National Electrical Code Article 725

National Electrical Code Article 760

NFPA 72

Principles of Electronics

Industrial Motor Control - Solar Power

Control Relays and Timers  
Jogging and Plugging Controls  
Manual Starters and Magnetic Coils  
Push Buttons, Selector Switches and Mechanical Devices  
Solid State Electronic Devices  
Variable Frequency Drives

Programmable Logic Control (PLC) - Solar Power

Developing Ladder Programming  
Introduction to Programmable Equipment  
Programming Programmable Logic Controllers  
Using Timers and Counters in Logic Programs  
Writing a Program

Electrical Design - Solar Power

3 and 4-Way Switching  
Design of Electrical Circuits  
Magnetic Motor Control and the Code  
Lon Works and Building Automation  
Transformers and the Code

Voice, Data and Video - Solar Power

Audio Distribution  
CCTV Security Surveillance  
Computer Networking  
Fiber Optics  
Telephonic Interconnect

Industry Specific Skills - Solar Power

Confined Space Entry  
Specialized Tools  
Conduit Bending  
Rigging  
Fire Stop Installation  
Blueprints and Schematics  
Work Flow and Resources

**COMMERCIAL SKILLS – Sheet Metal Workers**

HERS (California Home Energy Rating System Program)  
Ducts Maintenance  
Upgrading Lead Handling and Asbestos Removal Skills  
Advanced Welding Skills and Certification Preparation  
Tungsten Inert Gas (TIG), Metal Inert Gas (MIG), and/or Stick Welding  
Leadership in Energy and Environmental Design (LEED) and Title 24 Awareness [Green Training]  
Metal Building Methods and Materials

**COMMERCIAL SKILLS - Laborers**

Aerial Boom Lift – ABL  
Introduction Photovoltaic – iPhoto  
Advanced Photovoltaic – aPhoto  
Energy Audits  
Weatherization

**COMMERCIAL SKILLS - Plumbers**

Climate Energy Efficiency and Consumption  
Greenhouse Gas Abatement  
Solar Hot Water Installing and Retro Fitting  
Water Efficiency Products and Installations  
Hydronics Systems and Refrigeration  
Reuse/Recycled Water  
Medical Gas Installation  
Septic Tanks/Wastewater Treatment Systems

**COMMERCIAL SKILLS – All Trades**

Proper Installation and Use of Testing and Auditing Materials and Equipment (Green training)  
Understanding New Technologies and Changes to Industry Standards (Green training)  
Proper Equipment Set-up (Green training)  
Safe Working Practices  
Advanced Instrumentation and Motor Controls  
Programmable Logic Controllers  
Advanced Welding  
Architecture Designs and Advanced Plan Reading  
Management and Monitoring of Materials  
Testing Materials and Equipment –proper set up and use (Green training)  
Understanding Changes to Industry Standards (Green training)

**COMPUTER SKILLS – All Trades**

Auto Computer-Aided Design (AutoCAD) – Solar Applications

**BUSINESS SKILLS – All Trades**

Green Awareness Training and Green Certifications

Note: Reimbursement for retraining is capped at 200 total training hours per trainee, regardless of delivery method. Reimbursement for new hire training is capped at 260 total training hours per trainee, regardless of delivery method.